INDEX TO VOLUME 36

New names and the final members of new combinations are in **bold face type.**

Abies, 123, 320
Abutilon Avicennae, 672; Theophrasti, 672
Acacia constricta, 105; constricta **paucispina,** 105
Acalypha virginica, 666
Acer, 137, 139, 320; floridanum, 635; leucoderme, 635; Negundo, 184, 190, 191; nigrum, 656; pennsylvanicum, 656; platanoides, 118, 121, 128, 134, 139, 144, 191; Pseudo-platanus, 14; rubrum, 656, 660, 663, 664; saccharinum, 337, 338; Saccharum, 656, 660, 661, 663, 664, 668; Saccharum nigrum, 656; spicatum, 656, 662
Acerates, 263; **amboyensis,** 263
Acetabularia, 89, 90; crenulata, 80; exigua, 90, 91; parvula, 91; polyphysoides, 92
Acetabulum, 89, 90; polyphysoides, 90, 92, 93, 102, 103; polyphysoides **deltoideum,** 92, 93, 103; **pusillum,** 89–91, 102, 103
Achillea Millefolium, 668, 672
Achroanthes unifolia, 13
Acorus Calamus, 2
Acrostichum, 466; siliquosum, 466, 467, 469, 476; thalictroides, 466, 467, 469, 475
Actaea alba, 658
Actinophyllum, 643; **Belangeri,** 643; **Sciadophyllum,** 643; **troyanum,** 643, 644
Additions to the flora of Peninsular Florida, 159
Additions to the flora of the Carolinas, 635
Adiantum pedatum, 657, 661
Adicea pumila, 28
Adlumia cirrhosa, 662; fungosa, 662
Aesculus, 132; Hippocastanum, 119, 122, 128, 134, 139, 145
Afzelia pectinata, 587
Agaricus **bivelatus,** 335; **subnitens,** 335
Agrimonia Eupatoria, 666; gryposepala, 666; parviflora, 666
Agropyron, 540, 541; caninum unilaterale, 541; dasystachyum, 541; divergens inermis, 539; Gmelini, 541; **inerme,** 539; **latiglume,** 539; repens, 377; Richardsonii, 541; subvillosum, 541; violaceum latiglume, 539
Agrostemma Githago, 671
Agrostis aequivalvis, 531; **atrata,** 531; **Bakeri,** 532; geminata, 532; hiemalis geminata, 532; hyemalis, 660; idahoensis, 532; scabra, 660; tenuis, 532; tenuis erecta, 532; Thurberiana, 531
Alectoria, 316; chalybeiformis, 316; implexa, 316
Aletris farinosa, 8
Alicularia Breidleri, 302
Alisma, 545
Allium Cepa, 492; tricoccum, 659
Alnus, 130, 139, 545; glauca, 21, 22; incana, 21, 118, 128, 129, 134, 145; noveboracensis, 21, 22; rugosa, 21, 22
Alopecurus pratensis, 377
Alternaria, 236; tenuis, 236
Alvaradoa amorphoides, 162
Amanita **bivolvata,** 329; calyptrata, 330; **calyptratoides,** 329; **ocreata,** 330
Amaranthus retroflexus, 671
Amelanchier, 336; canadensis, 661, 664, 669
American birches, The western, 421
American botanical literature, (1908), 51, 113, 171; (1909), 227, 275; (1908), 345; (1909), 411, 485, 553, 611, 647, 699
Amorpha, 627
Ampelopis quinquefolia, 657, 661–663, 669
Amphicarpa monoica, 659
Amphisphaeria, 150; conica, 150
Anatomy of Parosela spinosa (A. Gray) Heller, Notes on the, 573
Anatomy of Sesban macrocarpa Muhl., Notes on the, 625
Anchistea virginica, 592
Andromeda, 262; **Cookii,** 261; flexuosa, 261
Anemia stricta, 245
Anemone nemorosa, 659; pennsylvanica, 669; virginiana, 666, 670
Anemonella thalictroides, 659
Anethum, 545
Anomodon apiculatus, 657, 658, 662; attenuatus, 657, 658, 662; rostratus, 657, 658, 662

Anoplanthus comosus, 695
Anthemis arvensis, 672; Cotula, 672
Antheridium in Dryopteris stipularis (Willd.) Maxon and "Nephrodium molle," The development of the imbedded, 557
Antirrhinum, 545
Anychia dichotoma, 666; polygonoides, 666
Aphyllon, 693, 694; arenosum, 694; californicum, 695, 697; comosum, 695; Cooperi, 695; fasciculatum luteum, 693; ludovicianum, 694; minutum, 692; multiflorum, 695; pinetorum, 695; Sedi, 692; tuberosum, 695; violaceum, 695
Apios tuberosa, 666
Aplozia riparia, 304
Aquilegia canadensis, 658, 660, 661, 668, 670
Arabis canadensis, 659, 666; glabra, 659; laevigata, 659, 670; lyrata, 660, 670; perfoliata, 659
Aralia racemosa, 658; Sciodaphyllum [Sciadophyllum], 643; trifolia, 658
Araliaceae, New combinations in, 643
Arctium Lappa, 672
Arethusa bulbosa, 13
Arisaema Dracontium, 659; pusillum, 1, 2; Stewardsonii, 1; triphyllum, 1, 2, 659, 661, 665
Aristolochia, 254; Serpentaria, 659
Armillaria **subannulata,** 330
Aronia arbutifolia, 587
Arrhenatherum elatius, 354, 377, 380
Artemisia Absinthium, 672
Artocarpus, 394
Asarum canadense, 657, 658, 660, 661; virginicum, 661
Asclepias phytolaccoides, 659; purpurascens, 659; tuberosa, 659
Ascyrum stans, 589
Asparagus officinalis, 8
Aspects of the mycorhiza problem, Some, 165
Aspergillus, 236, 241, 242; niger, 236, 244
Asphodelus ramosus, 543
Aspidium aculeatum multifidum, 558; angulare acutifolium multifidum, 558; angulare foliosum multifidum, 558; cristatum Clintonianum, 46; frondosum, 558
Asplenium, 41, 43, 545; ebeneum, 657; ebenoides, 41; Filix-foemina, 662; platyneuron, 657; platyneuron × Camptosorus rhizophyllus, 41, 42; **raritanense,** 246, 264; Ruta-muraria × Trichomanes, 41; Trichomanes, 657, 670
Aster cordifolius, 658, 666, 669; corymbosus, 666; divaricatus, 666; dumosus, 671; laevis, 659; macrophyllus, 666; multiflorus, 666, 671; Novae-Angliae, 659; oblongifolius, 659; patens, 666; prenanthoides, 666; sagittifolius, 666; vimineus, 659
Asterella Bolanderi, 301; Bonjeanii, 300; californica, 300, 301; fragrans, 301; gracilis, 301; Lindenbergiana, 300, 301; Palmeri, 301; pilosa, 301; violacea, 301
Astragalus, 625
Athamanta, 545
Athyrium, 43; Filix-foemina clarissima, 558; Filix-foemina coronatum, 558; Filix-foemina cruciato-cristatum, 558; Filix-foemina percristatum, 558; Filix-foemina unco-glomeratum, 558; nipponicum cristatum, 558
Atlantic coastal plain, Contributions to the Mesozoic flora of the, 245
Audibertia, 684; grandiflora, 684; incana, 684; polystachya, 683, 684
Audibertiella, 684; **argentea,** 683
Aulacomnium heterostichum, 658; palustre, 662
Avena, 374, 376; brevis, 377; fatua, 354, 377; nuda, 377; orientalis, 354, 377; sativa, 354, 356, 363, 377, 378; sterilis, 377; strigosa, 377
Azalea viscosa, 587
Azotobacter, 240

Bacillus Diphtheriae, 31, 37
Bacteria, A statistical criterion for species and genera among the, 31
BANKER, H. J. A new fungus of the swamp cedar, 341
Baptisia tinctoria, 666, 669
Barbula unguiculata, 178
Bartramia pomiformis, 658
Basilima, 397, 398
Belvisia, 466
BENEDICT, R. C. New hybrids in Dryopteris, 41; The genus Ceratopteris: a preliminary revision, 463
Benzoin aestivale, 661
BERRY, E. W. Contributions to the Mesozoic flora of the Atlantic coastal plain, 245
Beta vulgaris, 492
Betula, 132, 140, 545; alaskana, 422, 434; alba, 435; Andrewsi, 435; cordifolia, 437; **crenata,** 423, 429; **Elrodiana,** 423, 426, 429, 430; fontinalis, 423, 426, 427, 430–433; **glandulifera,** 424, 425, 427, 429; glandulosa, 423, 424, 426; Hallii, 424, 428; **Hornei,** 423, 425, 426; kenaica, 422, 431; lenta, 656, 660, 661, 663,

664, 669; **montanensis,** 423, 438, 439; nigra, 656; **obovata,** 423, 427, 428; occidentalis, 422, 431, 435, 437, 438, 440; papyracea, 435; papyrifera, 422, 434, 435, 437; pendula, 21, 27; Piperi, 422, 432, 433; populifolia, 21, 118, 128, 129, 134, 135, 144; pubescens, 21, 27; pumila, 425, 427, 429; pumila glandulifera, 425; pumila setarioides, 428; Sandbergi, 423, 429, 430; **subcordata,** 422, 435–437; utahensis, 422, 432

BICKNELL, E. P. The ferns and flowering plants of Nantucket, 1, 441

Birches, The western American, 421

BLACK, C. A. The development of the imbedded antheridium in Dryopteris stipularis (Willd.) Maxon and "Nephrodium molle," 557

Blephariglottis Blephariglottis, 12; Blephariglottis holopetala, 12; ciliaris, 12; lacera, 12

Blyttia Mörkii, 301

Boehmeria cylindrica, 28, 29; scabra, 28

Boletus **Morrisii,** 154

Bombardia, 149; fasciculata, 149

Boschniakia, 693, 694

Botanical literature, American, (1908), 51, 113, 171; (1909), 227, 275; (1908), 345; (1909), 411, 485, 553, 611, 647, 699

Botrychium obliquum, 657; virginianum, 657, 661

Botrytis pilulifera, 155; **uredinicola,** 155

Bourreria virgata, 162

Bovistella **floridensis,** 338

Brassica nigra, 671; oleracea, 492; Rapa, 492

Bromus aleutensis, 538, 539; **Flodmanii,** 538, 539; Hookerianus, 539; marginatus latior, 538, 539; mollis, 377

Brunella vulgaris, 672

Bryonia, 180; alba, 180; dioica, 180

Bryum argenteum, 178, 658, 662; caespiticium, 658, 662; roseum, 658, 662

Buds with reference to their growth and leaf content, The study of winter, 117

BUTLER, B. T. The western American birches, 421

Cactus missouriensis, 269

Caesalpinia Cookiana, 257; **raritanensis, 257**

Calboa, 595, 596; globosa, 597; vitifolia, 602

Calceolus, 544

California, Two new spermatophytes from, 605

Calopogon pulchellus, 638

Calycularia Blyttii, 301

Cammarum, 545

Campanula americana, 659; rotundifolia, 465, 660, 669, 670

CAMPBELL, D. H. The embryo-sac of Pandanus, 205

Camptosorus rhizophyllus, 657, 660, 661; rhizophyllus × Asplenium platyneuron, 41, 42

Cannabis, 181; sativa, 28

Caperonia castanaefolia, 161

Capsella Bursa-pastoris, 671

Carduus, 545

Carex, 591; **Abramsii,** 482; cladostachya, 478, 479; decumbens, 480; ebenea, 481; festiva, 481; festiva decumbens, 480; folliculata, 483, 484; folliculata australis, 483; **fuscotincta,** 478, 479; glaucescens, 591; **Holmiana,** 481, 482; idahoa, 482; luzulaefolia, 483; **macrosperma,** 477, 479; **nubicola,** 480, 481; **perstricta,** 479, 480; platyphylla, 658; polystachya, 478; salina minor, 477; **salinaeformis,** 477; Schiediana, 480; **Smalliana,** 483, 484

Carex, Notes on, 477

Carolinas, Additions to the flora of the, 635

Carpinus caroliniana, 20, 656, 661

Carya alba, 664; porcina, 663

Casearia, 399

Cassia Chamaecrista, 671; marilandica, 671; nictitans, 671

Castanea, 545; dentata, 14, 22, 656, 663, 664

Castilleja, 694; coccinea, 671

Catharinea angustata, 658, 665; undulata, 658, 662

Caulophyllum thalictroides, 659

Ceanothus americanus, 663

Cedar, A new fungus of the swamp, 341

Celastrus scandens, 337, 657, 660, 663, 664

Celtis australis, 155; occidentalis, 155, 656, 668

Centaurium, 545

Central America, The Crataegi of Mexico and, 501

Cephalanthera, 543–548; Damasonium, 543; ensifolia, 544; grandiflora, 544; longifolia, 543–545

Cephalanthus, 587

Cephalozia, 302, 305; curvifolia, 662; laxifolia, 304; **Notarisiana,** 304

Cerastium arvense oblongifolium, 658, 660, 668, 670; vulgatum, 671

Ceratochloa breviaristata, 539
Ceratodon purpureus, 178, 658
Ceratopteris, 463, 466, 467, 475, 563, 568; cornuta, 469, 475; **deltoidea,** 464, 467, 472, 473; Gaudichaudii, 475; Lockharti, 467, 469, 471, 475; Parkeria, 470, 475; pteridoides, 464, 466, 467, 470, 475; Richardii, 470, 475; siliquosa, 469, 470; thalictroides, 466–469, 475
Ceratopteris: a preliminary revision, The genus, 463
Cercis canadensis, 662
Cercospora **biformis,** 156; **brunnea,** 156; fuscovirens, 156; Prenanthis, 156; truncatella, 156
Cereals, The mildews of the, 353
Chamaebatia, 398; foliolosa, 398
Chamaebatiaria, 398; glutinosa, 398; Millefolium, 398
Chamaecyparis thyoides, 320, 341, 342
Chamaesyce Blodgettii, 161
Characters and relationships of the Platanaceae, On the, 389
Chelone glabra, 660, 669
Chemical stimulation, Nitrogen assimilation of Sterigmatocystis nigra and the effect of, 235
Chenopodium album, 671; Botrys, 671
Cholisma ligustrina, 587
Chrysanthemum Leucanthemum, 672; Parthenium, 672
Cimicifuga racemosa, 658
Circaea lutetiana, 659
Cirriphyllum Boscii, 658, 662, 665
Cirsium, 545; arvense, 672; lanceolatum, 672
Citrophyllum, 258; **aligerum,** 258, 264
Citrus, 258; Limonum, 264; vulgaris, 264
CLARK, L. Some noteworthy Hepaticae from the state of Washington, 299
Claytonia virginica, 659
Clematis virginiana, 657, 665
Climacium americanum, 658, 662, 665; dendroides, 658, 662, 665
Clitocybe eccentrica, 331; **microspora,** 331; **sphaerospora,** 331
Clitopilus **Davisii,** 153
Coastal plain, Contributions to the Mesozoic flora of the Atlantic, 245
Coastal plain plants in the Piedmont region of Georgia, Some, 583
Coccoloba, 260
Coelosphaeria, 147, 148; Fuckelii, 147
COKER, W. C. Additions to the flora of the Carolinas, 635
Colletotrichum Trifolii, 384
Colubrina reclinata, 161
Comandra umbellata, 29, 666
Comarella, 406, 407
Combinations in Araliaceae, New, 643
Commelina communis, 671; nudiflora, 671
Comptonia peregrina, 19
Condalia, 105
Conocephalum, 615, 619, 620; conicum, 615, 616, 618–620, 622, 658, 662
Conocephalum conicum, The development of the sporogonium and adjacent tissues of the gametophore of, 615
Conocephalus, 615
Conopholis, 693
Contributions to the Mesozoic flora of the Atlantic coastal plain, 245
Convallaria, 545; odorata, 409, 410; Polygonatum, 409, 410
Convallaria odorata Mill.?, What is, 409
Convolvulaceae—V. Quamoclit, Studies in the North American, 595
Convolvulus acutangularis, 599; arvensis, 672; coccineus, 598; hastigerus, 600; hederifolius, 599; indivisus, 599; luteolus, 600; Neei, 602; pennatifolius, 596; pennatus, 596; Quamoclit, 596; sanguineus, 599
COOK, M. T. Notes on the embryo-sac of Passiflora adenophylla, 273
Corallina conglutinata, 94, 96; vermicula, 87
Corallorhiza, 167, 168; multiflora, 167; odontorhiza, 662
Coriolus, 342
Cornus circinata, 656; florida, 664; mas, 129; paniculata, 656
Corydalis aurea, 659; glauca, 659
Corylus americana, 20, 661; rostrata, 20
Covillea, 105
Cracca cinerea, 161; **corallicola,** 160
Crataegi, New North American, 639
Crataegi of Mexico and Central America, The, 501
Crataegus, 501–503, 511, 640; Baroussana, 501, 504; **Brittonii,** 640, 641; Carrierei, 503; columbiana, 642; Crus-galli, 503; Douglasii, 642; grandiflora, 503; **Greggiana,** 504, 511, 639; grignoniensis, 503; hypolasia, 506; Lavallei, 503; lobata, 503; mexicana, 502–504, 506, 508, 510; mexicana **microsperma,** 508; **Nelsoni,** 504, 512; **Parryana,** 504, 510; pubescens, 502–505, 508, 511; pubescens **Botterii,** 506; quitensis, 501; **Rosei,** 504, 509, 511; spinosa, 501; stipulacea, 503; stipulosa, 501–504, 508; subserrata, 506, 508; tomentosa, 641;

Tracyi, 639; uniflora, 641; Vailiae, 640, 641; **Williamsii,** 641, 642
Cristatella Jamesii, 269
Criterion for species and genera among the bacteria, A statistical, 31
Crotalaria Purshii, 637; sagittalis, 671
Cryptanthe affinis, 679; ambigua, 680; barbigera, 679; **confusa,** 679; **grandiflora,** 679; leiocarpa, 679, 680; **leptophylla,** 678; Torreyana, 680; Torreyana calycosa, 680
Cryptosphaeria, 148; Taxi, 148
Cryptotaenia canadensis, 658
Cucurbita foetidissima, 269
Cunila Mariana, 663, 666; origanoides, 663, 666
Cuphea petiolata, 666; viscosissima, 666
Cyathisphaeria, 147
Cylindrosporium, 148; concentricum, 148
Cynoctonum sessilifolium, 588, 591
Cynoglossum officinale, 659
Cyperus Martindalei, 637; pseudovegetus, 587
Cypripedium, 543, 545, 546; acaule, 12; Calceolus, 544; pubescens, 659
Cyrilla racemiflora, 589
Cystopteris bulbifera, 657; fragilis, 670, 671

Dactylis glomerata, 377
Dalea, 573, 575, 576, 579; alopecuroides, 578; polyadenia, 575; versicolor, 574
Damasonium, 545
DANDENO, J. B. Osmotic theories, with special reference to van't Hoff's law, 283
DARLING, C. A. Sex in dioecious plants, 177
Dasystephana parvifolia, 637
Datura Stramonium, 672
Daucus Carota, 492, 672
Dendropanax, 644; **brachypodum,** 644; **insulare,** 644; **laurifolium,** 644
Dennstaedtia punctilobula, 657
Dentaria diphylla, 659; laciniata, 659
Deschampsia caespitosa, 533; caespitosa confinis, 533; **confinis,** 533
Desmodium acuminatum, 666; canescens, 666; grandiflorum, 666; nudiflorum, 666; viridiflorum, 666
Development of the imbedded antheridium in Dryopteris stipularis (Willd.) Maxon and "Nephrodium molle," The, 557
Development of the sporogonium and adjacent tissues of the gametophore of Conocephalum conicum, The, 615
Dewalquea grönlandica, 252
Dialonectria, 202; vulpina, 203
Dianthus Armeria, 671; barbatus, 671
Dicentra canadensis, 659; Cucullaria, 659
Dicksonia borealis, 245, 246; groenlandica, 245
Dicranella Fitzgeraldi, 658; heteromalla, 657, 658, 662; scoparium, 658
Diervilla Lonicera, 656, 664; trifida, 656, 664
Diodia rigida, 163; virginiana, 587
Dioecious plants, Sex in, 177
Diospyros, 263; **amboyensis,** 262; primaeva, 263
Diplococci, 36
Diplodia, 148
Diplodina **fusispora,** 337
Diplophylleia albicans, 305; apiculata, 305; obtusifolia, 305; taxifolia, 305
Diplophyllum obtusifolium, 305
Dipsacus sylvestris, 672
Distichlis **dentata,** 536; spicata, 536; stricta, 536; thalassica, 536
Ditaxis **cyanophylla,** 106; mercurialana, 106
Ditrichum pallidum, 658; tortile, 658
Dothiorella **Celastri,** 337
Doxema, 595
DRUCE, G. C. Helleborine Hill or Epipactis Adans.?, 543; What is Convallaria odorata Mill.?, 409
Dryopteris, 41, 43–45; Boottii, 42; Clintoniana, 41, 42, 44, 45, 47, 48; Clintoniana × intermedia, 42, 46; Clintoniana silvatica, 47; Clintoniana × **spinulosa,** 45, 48; cristata, 41, 42, 44, 46, 47; cristata × **Goldiana,** 47, 48; cristata × intermedia, 42; cristata × marginalis, 41–45; cristata × spinulosa, 42, 46; dilatata, 44; Filix-mas, 44; Goldiana, 41, 42, 44, 47, 48; Goldiana **spinulosa,** 47, 48; intermedia, 41, 42, 44, 49; intermedia × **marginalis,** 48, 49; marginalis, 41, 42, 44, 46, 657, 658, 661, 668, 670; marginalis × **spinulosa,** 49; noveboracensis, 662; parasitica, 557; pittsfordensis, 42, 49; simulata, 662; spinulosa, 41, 42, 46–48, 662; spinulosa intermedia, 662; stipularis, 559, 560, 563–566, 568–570
Dryopteris, New hybrids in, 41
Dryopteris stipularis (Willd.) Maxon and "Nephrodium molle," The development of the imbedded antheridium in, 557

Eatonia intermedia, 533
Eccilia **flavida,** 153
Echinocereus viridiflorus, 269

Echinodontium tinctorium, 342
Echium vulgare, 672
Eclipta alba, 671
Effect of chemical stimulation, Nitrogen assimilation of Sterigmatocystis nigra and the, 235
Effect of mechanical pressure on the roots of Vicia Faba, Notes on the, 457
EGGLESTON, W. W. New North American Crataegi, 639; The Crataegi of Mexico and Central America, 501
Eleocharis tuberculosa, 591
Ellobocarpus, 475; cornutus, 475; olcraceus, 476
Elymus, 540, 541; europaeus, 380; glaucus, 540; **jejunus,** 539; Macounii, 541; **marginalis,** 539; **Petersonii,** 540; Saundersii, 541; virginicus jejunus, 539; virginicus minor, 539; **vulpinus,** 540, 541
Embryo-sac of Pandanus, The, 205
Embryo-sac of Passiflora adenophylla, Notes on the, 273
Epilobium coloratum, 659
Epipactis, 543, 545–548; latifolia, 547; Royleana, 547
Epipactis Adans.?, Helleborine Hill, or, 543
Epiphegus virginiana, 659
Eremocarya lepida, 677; micrantha, 677; **muricata,** 677
Erianthus strictus, 591
Erigeron bellidifolius, 659; philadelphicus, 659; pulchellus, 659
Eriocaulon septangulare, 3
Eritrichium barbigerum, 679; circumscissum, 677
Ervum, 545
Erysiphe, 353; Cichoracearum, 353; Graminis, 353, 354, 380, 385
Erythronium americanum, 659
Eucalyptus, 261; angusta, 260, 264
Eupatorium ageratoides, 658, 660, 666; purpureum, 659; rotundifolium, 587; urticaefolium, 658, 660, 666; verbenaefolium, 587
Euphorbia hirsuta, 671; maculata, 671; Preslii, 671
Euquamoclit, 596
Eurynchium hians, 661
Exogonium umbellatum, 602

Fagopyrum esculentum, 671; Fagopyrum, 456
Fagus, 134, 140, 545; americana, 118, 122, 128, 129, 133, 144, 656, 660, 661, 663; grandifolia, 22, 656, 661, 663; sylvatica, 118, 122, 128, 129, 133
Fegatella conica, 615
Ferns and flowering plants of Nantucket, 1, 441
Ferns, The power of growth exhibited by ostrich, 221
Festuca, 538; amethystina asperrima, 537; asperrima, 537; **calligera,** 537; elatior, 377; elatior arundinacea, 377; elatior pratensis, 377; heterophylla, 377; megalura, 538; octoflora, 538; ovina, 537; ovina calligera, 537; ovina pseudovina, 536, 537; pacifica, 538; pseudovina, 536, 537; reflexa, 538; **saximontana,** 536, 537; stricta, 537
Ficus, 258, 394; aligera, 258; bumelioides, 258; Mudgei, 258; ovata, 253; **ovatifolia,** 253; Woolsoni, 253
Filipendula, 404; denudata, 404; kamtschatica, 404; occidentalis, 404; rubra, 404; Ulmaria, 404
Fimbriaria Bonjeanii, 300; Lindenbergiana, 300
Fissidens bryoides, 658, 662; osmundioides, 658
Flabellaria conglutinata, 96
Flammula **praecox,** 334
Flora of Peninsular Florida, Additions to the, 159
Flora of the Atlantic coastal plain, Contributions to the Mesozoic, 245
Flora of the Carolinas, Additions to the, 635
Flora, Studies on the Rocky Mountain, 531, 675
Florida, Additions to the flora of Peninsular, 159
Flowering plants of Nantucket, 1, 441
Foeniculum, 545; officinale, 672
Forsythia viridissima, 129
Fragaria vesca, 666; virginiana, 666
Fraxinus, 122, 123, 139; americana, 14, 118, 122, 123, 128, 129, 134, 656, 661, 664; caroliniana, 588; pennsylvanica, 656; pubescens, 656, 669
Freycinetia, 207
Frullania eboracensis, 657
Funaria hygrometrica, 658, 662, 665
Fungi, New Species of, 153, 329
Fungi, The present treatment of monotypic genera of, 147
Fungus of the swamp cedar, A new, 341
Furcaria, 475; cornuta, 475; thalictroides, 476
Fusamen, 157
Fusarium, 165; **Bartholomaei,** 157; **juglandinum,** 157; Lini, 383
Fusisporium, 157

Galinsoga parviflora, 672
Galium Aparine, 658; boreale, 670; circaezans, 659; triflorum, 658

Gametophore of Conocephalum conicum, The development of the sporogonium and adjacent tissues of the, 615
Gaylusaccia baccata, 664; frondosa, 664; resinosa, 664
Genera among the bacteria, A statistical criterion for species and, 31
Genera of fungi, The present treatment of monotypic, 147
Gentiana, 545; Elliottii, 637; quinquefolia, 659
Genus Ceratopteris: a preliminary revision, The, 463
Genus Neomeris and notes on other Siphonales, The, 75
Genus Usnea, as represented in New England, Preliminary notes on the, 309
Geocalyx graveolens, 657, 658, 662
Georgia, Some coastal plain plants in the Piedmont region of, 583
Geranium Robertianum, 658, 660, 668–670
Gerardia, 163; domingensis, 163; flava, 666
Geum album, 666; virginianum, 666
Gilibertia, 644; brachypoda, 644; insularis, 644; laurifolia, 644
Gillena, 398
Gillenia, 398; trifoliata, 659
Glaucium, 545
GLEASON, H. A. Some unsolved problems of the prairies, 265
Gloeosporium, 148
Glyceria fluitans, 377
Goniostachyum **citrosum,** 162; graveolens, 162
GOODLATTE, A. R. Notes on the anatomy of Parosela spinosa (A. Gray) Heller, 573
Goodyera, 546; pubescens, 662
GRAHAM, M. The development of the sporogonium and adjacent tissues of the gametophore of Conocephalum conicum, 615
Greeneocharis, 678; **circumscissa,** 677
GREGORY, L. H. Notes on the effect of mechanical pressure on the roots of Vicia Faba, 457
GRIGGS, R. F. On the characters and relationships of the Platanaceae, 389
Growth and leaf content, The study of winter buds with reference to their, 117
Growth exhibited by ostrich ferns, The power of, 221
GRUENBERG, B. C. Some aspects of the mycorhiza problem, 165
Gunnera, 206, 210, 216, 217; Hamiltonii, 216; macrophylla, 206, 216, 217
Gymnadeniopsis clavellata, 12
Gymnoascus, 236
Gymnocolea laxifolia, 304
Gyroceras Celtidis, 155; **divergens,** 155

Habenaria lacera, 659; Nuttallii, 635
Halimeda, 93, 94; **lacrimosa,** 93, 94, 100, 102; Tuna, 94
Hamamelis virginiana, 656, 661, 663, 664, 668
Haplosporella, 337
HARPER, R. M. Some coastal plain plants in the Piedmont region of Georgia, 583
HARSHBERGER, J. W. The plant formations of the Nockamixon Rocks, Pennsylvania, 651
Hawaiian Scaevola, A new, 645
Heckeria, 216
Hedeoma Drummondii, 685; **longiflora,** 685; ovata, 685; pulegioides, 666; sancta, 685; thymoides, 685
Hedysarum, 545
Helenium autumnale, 671
Helianthus angustifolius, 586; annuus, 457; decapetalus, 658, 659; divaricatus, 666; strumosus, 666; tuberosus, 492
Helleborine, 543–548; **africana,** 546; **atropurpurea,** 543, 547; **babianifolia,** 547; **consimilis,** 547; **gigantea,** 547; latifolia, 543, 547; longifolia, 547; **microphylla,** 547; **orbicularis,** 547; palustris, 543, 544, 547; **papillosa,** 547; **pycnostachys,** 547; **somaliensis,** 547; **Thunbergii,** 547; **trinervia,** 547
Helleborine Hill or Epipactis Adans.?, 543
Helleborus, 545; niger, 671
Hemerocallis fulva, 7
Hepatica triloba, 659, 661, 668
Hepaticae from the state of Washington, Some noteworthy, 299
Herminium, 546
Herpotrichia rhodospila, 154; **rhodospiloides,** 154
Heteranthera dubia, 3
Heuchera americana, 660, 668, 670
Hibiscus Trionum, 672
Hicoria, 122, 130, 132, 140; alba, 19; glabra, 19, 663; microcarpa, 19, 119, 129, 133; ovata, 20, 118, 122, 128, 129, 131, 664
Hieracium canadense, 666; paniculatum, 666; scabrum, 666; venosum, 666
Hoff's law, Osmotic theories, with special reference to van't, 283
Holodiscus, 400; argenteus bifrons, 403; australis, 401, 402; dumosus, 401; microphyllus, 401

Hordeum, 366, 374, 376; bulbosum, 354, 357, 366, 377; coeleste, 356; decipiens, 377; deficiens, 354; **depressum,** 539; distichon, 354–356, 358, 360, 362, 364–366, 377, 379; hexastichon, 354, 377; hexasticho-furcatum, 385; intermedium, 354, 356, 377; jubatum, 354, 358, 366, 367, 377; Kaufmanni, 356; maritimum, 354, 355, 359, 367, 377; murinum, 354, 377; nodosum, 359, 362, 366, 377, 379; nodosum depressum, 539; nudum, 354, 355, 358, 360, 362, 364, 366, 377, 379; pratense, 359; sativum distichon, 355, 358, 360, 364; sativum hexastichon, 356; sativum vulgare, 356, 361, 363; secalinum, 354, 359, 366, 377, 379; silvaticum, 354, 377, 380; spontaneum, 385; Steudelii × trifurcatum, 355, 360, 366, 377; tetrastichon, 355, 361, 366, 377; tetrastichon trifurcatum, 361; trifurcatum, 354–356, 361, 366, 377; vulgare, 354–366, 369, 371, 375, 377, 378; Zeocriton, 354–356, 358, 362–364, 366, 369, 375, 378–380

Horkelia, 404, 406; Baileyi, 406; bernardina, 405; Bolanderi Parryi, 405; Brownii, 404, 405; californica paucifoliata, 404; Congdonis, 406; congesta, 405; fusca tenella, 405; glandulosa, 404; Gordonii, 406; hispidula, 404, 405; integrifolia, 404, 405; Micheneri, 405; Parryi, 405; parviflora, 405; platycalyx, 404; pulchra, 404, 405; Rydbergii, 404; sericata, 405; tenella, 405; tenuisecta, 404, 405; tridentata, 405; truncata, 404; utahensis, 406; Wilderae, 404

Horkeliella, 406

HOUSE, H. D. Studies in the North American Convolvulaceae—V. Quamoclit, 595

HOWE, M. A. Phycological Studies—IV. The genus Neomeris and notes on other Siphonales, 75

HOWE, R. H., JR. Preliminary notes on the genus Usnea, as represented in New England, 309

Humulus japonicus, 28; Lupulus, 27, 671

Hybrids in Dryopteris, New, 41

Hydrangea arborescens, 656, 660–662

Hydrastis canadensis, 659

Hydrophyllum canadense, 658; virginicum, 658

Hygrobiella laxifolia, 304

Hylocomium proliferum, 658; triquetrum, 658

Hymenaea dakotana, 257

Hypenantron Bonjeanii, 300; Lindenbergianum, 300

Hypericum ellipticum, 666; perforatum, 672

Hypholoma **campanulatum,** 336

Hypocreales—II. Nectria Peziza, Notes on North American, 201

Hypoxis erecta, 665; hirsuta, 11

Ibidium Beckii, 13; cernuum, 13; gracile, 13

Ilex **amboyensis,** 259; glabra, 589; ovata, 259

Impatiens biflora, 657, 660, 661, 665, 668; fulva, 657, 660–662, 665, 668

Index to American botanical literature, (1908), 51, 113, 171; (1909), 227, 275; (1908), 345; (1909), 411, 485, 553, 611, 647, 699

Indigofera, 627

Inocybe **Bakeri,** 332; **bulbosa,** 333; rimosa, 333; sambucina, 333

International Botanical Congress of Vienna in 1905, Propositions relating to the amendment and completion of the International Rules of Botanical Nomenclature adopted by the, 55

Ipomoea, 595; acuminata, 598; angularis, 598; angulata, 598; Batatas, 492; coccinea, 595, 598, 600; cholulensis, 598; coccinea hederifolia, 600; coccinea luteola, 600; coccinea pubescens, 600; cyamoclita, 596; dichotoma, 599; erythraea, 599; Funis, 601; globosa, 598; Hartwegii, 598; hastigera, 599; hederifolia, 599; Humboldtiana, 599; Llaveana, 601; luteola, 600; Quamoclit, 595, 596, 666; pandurata, 666; parviflora, 599; peduncularis, 602; phoenicea, 599; sanguinea, 599; versicolor, 602

Iris prismatica, 11; versicolor, 11

Isothea, 149; Nyssae, 149

Ivesia, 406; argyrocoma, 406; Baileyi, 406, 407; callida, 407; chaetophora, 406; eremica, 406, 407; Gordonii, 406; lycopodioides, 406; megalopetala, 406; pygmaea, 406; setosa, 406; Shockleyi, 406; Tweedyi, 406, 407; unguiculata, 406

Jamesoniella, 303

Juglans, 206; cinerea, 656, 661, 668; nigra, 157, 656

Juncoides campestre, 7

Juncus abortivus, 636; acuminatus, 7; aristulatus, 6, 587; articulatus, 6; balticus, 4; brevicaudatus, 7; bufonius, 4; canadensis, 7; canadensis coarctatus, 7; dichotomus, 5, 6; ef-

fusus, 4; effusus compactus, 4; filiformis, 4; Gerardi, 4; Greenei, 5; marginatus, 6; militaris, 6; nodosus, 7; pelocarpus, 6; scirpoides, 587; tenuis, 4, 5; tenuis anthelatus, 5; trigonocarpus, 591
Jungermannia, 303; **Allenii,** 303, 304, 307; atrovirens, 304; Blyttii, 391; cordifolia, 303, 304; laxifolia, 304; obtusifolia, 305; pumila, 304; riparia, 304
Juniperus virginiana, 653, 656, 663, 664, 668, 670

Kalmia angustifolia, 662; latifolia, 662
Koeleria truncata major, 533
Kopsia, 694
Krynitzkia circumscissa, 677

Laestadia, 149; rhytismoides, 149
Lamium amplexicaule, 672; maculatum, 671, 672
Lantana canescens, 162; ovatifolia, 163
Laplacea, 399
Laportea canadensis, 657, 661
Lappula **leucotricha,** 676; occidentalis, 676, 677
Larix, 320
Lastrea pseudo-mas cristata apospora, 558; pseudo-mas polydactyla, 557
LATHAM, M. E. Nitrogen assimilation of Sterigmatocystis nigra and the effect of chemical stimulation, 235
Laurophyllum angustifolium, 256; elegans, 255; lanceolatum, 255; nervillosum, 255, 256; reticulatum, 256
Laurus angusta, 256; plutonia, 255, 256
Leaf content, The study of winter buds with reference to their growth and, 117
Lechea major, 666; minor, 666; villosa, 666
Leguminosites **raritanensis,** 257, 264
Lemna minor, 2; trisulca, 2
Lens, 545
Leonurus Cardiaca, 671
Lepidium campestre, 671
Leptonia **flavobrunnea,** 332
Leptorchis Loeselii, 13
Lespedeza angustifolia, 587; capitata, 666; Nuttallii, 666; procumbens, 666; violacea, 666
Lesquerella argentea, 269
Leucobryum glaucum, 658, 665
Lichen barbatus, 310; floridus, 310
Lilium, 183, 215, 216; philadelphicum, 8, 665; superbum, 8
Limodorum, 544; tuberosum, 12, 638
Limonium, 545
Linaria, 545; vulgaris, 668
Lindera Benzoin, 661
Lindleya, 399
Lindleyella, 399; mespiloides, 399; Schiedeana, 399
Linum, 545; usitatissimum, 671; virginianum, 666;
Liparis liliifolia, 659
Lippia stoechadifolia, 162
Liquidambar, 586
Liriodendron, 122, 139; Tulipifera, 119, 122, 128, 134, 144, 656, 661
Liriodendropsis, 257
Listera, 544, 546
Literature, American botanical, (1908), 51, 113, 171; (1909), 227, 275; (1908), 345; (1909), 411, 485, 553, 611, 647, 699
Lithophragma, 693
Lithospermum arvense, 666; circumscissum, 677
Lobelia glandulosa, 587; inflata, 659; spicata, 659
Lolium italicum, 378; perenne, 378
Lonicera Caprifolium, 657, 660, 664, 668; grata, 657, 660, 664, 668
Lophanthus nepetoides, 659
Lophocolea heterophylla, 657, 658, 662
Ludwigia alternifolia, 587; hirtella, 588; linearis, 588
Luzula campestris multiflora, 7
Lychnis alba, 671; vespertina, 671
Lycopodium alopecuroides, 591; clavatum, 657; complanatum, 657
Lysimachia Nummularia, 671; quadrifolia, 671

MACKENZIE, K. K. Notes on Carex—V., 477
Macrosporium cucumerinum, 383
Macrostemma, 595; vitifolia, 602
Madrepora Acetabulum, 90
Madronella **oblongifolia,** 686; **sessilifolia,** 685
Magnolia, 254; auriculata, 253, 254; Boulayana, 254; glauca, 587; glaucoides, 254; **Hollicki,** 253
Maianthemum canadense, 661, 669
Malacothrix altissima, 607; **arachnoidea,** 605, 608, 609; implicata, 607; saxatilis, 607, 609; tenuifolia, 607
Malaxis, 544
Malva rotundifolia, 671; sylvestris, 672
Malvastrum coccineum, 109
Marchantia, 179, 615, 617–619, 622; polymorpha, 179, 658, 660–662
MCGREGOR, E. A. Two new spermatophytes from California, 605
Mechanical pressure on the roots of Vicia Faba, Notes on the effect of, 457

Medeola virginiana, 9, 659
Medicago sativa, 671
Melampyrum americanum, 666
Melandrium, 193; album, 181
Melanthera aspera, 164; deltoidea, 164; **radiata,** 163, 164
Melilotus, 545; alba, 671; officinalis, 671
Menispermum canadense, 657, 665
Mentha, 684; arvensis glabrata, 686; arvensis lanata, 687; arvensis Penardi, 686; borealis, 686; canadensis, 686, 687; canadensis borealis, 686; canadensis glabrata, 686; canadensis glabrior, 686; canadensis lanata, 687; grabrata, 687; **glabrior,** 686, 687; **lanata,** 687; **occidentalis,** 687; Penardi, 686, 687; piperita, 672; rotundifolia, 672; spicata, 672; viridis, 672
Menyanthes, 545
Mercurialis annua, 181
Mertensia alpina, 681; arizonica, 681; **cana,** 698; canescens, 698; ciliata, 680; **humilis,** 681; intermedia, 681; lanceolata, 681; **Leonardi,** 680; obtusiloba, 681; **pallida,** 680; stenoloba, 681; virginica, 659
Mesozoic flora of the Atlantic coastal plain, Contributions to the, 245
Mespilus pubescens, 505, 508, 511; stipulosa, 508
Metzgeria conjugata, 662
Meum, 545
Mexico and Central America, The Crataegi of, 501
Micrococci, 36
Microsphaera, 353
Mikania scandens, 671
Mildews of the cereals, The, 353
Mina, 595, 596; lobata, 602
Mitchella repens, 659
Mitella diphylla, 657, 661
Mnium affine, 658; punctatum, 658, 662; rostratum, 658; sylvaticum, 658, 662, 665
Moerckia Blyttii, 301
Mollugo verticillata, 671
Monarda fistulosa, 666; punctata, 666
Monardella odoratissima, 685, 686
Monotropa, 166, 167; uniflora, 659
Monotypic genera of fungi, The present treatment of, 147
MOORE, E. The study of winter buds with reference to their growth and leaf content, 117
Morenoa, 595; globosa, 597, 598; grandiflora, 601
MORRIS, E. L. North American Plantaginaceae, 515
Morus alba, 28; rubra, 656, 660
Mucor, 179, 242; Mucedo, 179
Muhlenbergia, 531; depauperata, 531; **squarrosa,** 531; tenuiflora, 670; Willdenowii, 670
Mycorhiza problem, Some aspects of the, 165
Myosotis palustris, 659; scorpioides, 659
Myrica, 249; carolinensis, 19, 590, 592; Gale, 18; grandifolia, 249; Hollicki, 249, 264; pumila, 590
Myrsine elongata, 262; **Gaudini,** 262
Myrsinites Gaudini, 262
Myxosporium **acerinum,** 338
Myzorrhiza, 693, 694; **californica,** 695, 696, 697; chilensis, 694; **Cooperi,** 695; **corymbosa,** 696, 697; **Grayana,** 695, 696; ludoviciana, 694, 696; multiflora, 695; **pinorum,** 695; **tuberosa,** 695; **violacea,** 695; **xanthochroa,** 696

Nabalus altissimus, 662
Naemaspora, 149
Naias, 466; obvoluta, 476
Nantucket, The ferns and flowering plants of, 1, 441
Nardia, 302, 303; Breidleri, 302, 303; compressa, 303; Geoscyphus, 302
Naucoria **vinicolor,** 334
Nectria, 201, 202; betulina, 202, 203; lasioderma, 203; Peziza, 202, 203; rimincola, 202, 203; Umbellulariae, 203; vulpina, 202, 203
Nectria Peziza, Notes on North American Hypocreales—II., 201
Neocosmospora vasinfecta, 384
Neomeris, 75, 78; annulata, 76, 79, 80, 85–88, 90, 100; cespitosa, 78; Cokeri, 76, 77, 79, 85, 87, 89, 92, 100; dumetosa, 75–85, 100, 102; Kelleri, 83, 87; **mucosa,** 76, 79, 84–87, 100; **stipitata,** 76, 82, 83, 86, 87, 100, 101; **van Bosseae,** 76, 78, 80–82, 84, 86, 100, 101
Neomeris and notes on other Siphonales, The genus, 75
Neorthosis, 595
Neottia, 546
Nepeta Cataria, 668, 672; Glechoma, 671, 672; hederacea, 671, 672
Nephrodium, 559; cristatum Clintonianum f. silvaticum, 47, 48; dilatatum cristatum gracile, 558; molle, 557, 560, 563, 565, 568, 569, 571; Oreopteris coronans, 558
"Nephrodium molle," The development of the imbedded antheridium in Dryopteris stipularis (Willd.) Maxon and, 557

New combinations in Araliaceae, 643
New England, Preliminary notes on the genus Usnea, as represented in, 309
New fungus of the swamp cedar, A, 341
New Hawaiian Scaevola, A, 645
New hybrids in Dryopteris, 41
New Jersey, Contributions to the Mesozoic flora of the Atlantic coastal plain—III., 245
New Mexico, Some hitherto undescribed plants from, 105
New North American Crataegi, 639
New species of fungi, 153, 329
New species of Puccinia, A, 549
New spermatophytes from California, 605
Nidus avis, 544, 546
Nitrogen assimilation of Sterigmatocystis nigra and the effect of chemical stimulation, 235
Nitschkia, 147, 148
Nitzschia, 147
Nockamixon Rocks, Pennsylvania, The plant formations of the, 651
Nomenclature adopted by the International Botanical Congress of Vienna in 1905, Propositions relating to the amendment and completion of the International Rules of Botanical, 55
North American Convolvulaceae—V. Quamoclit, 595
North American Crataegi, New, 639
North American Hypocreales—II. Nectria Peziza, Notes on, 201
North American Plantaginaceae, 515
Notes on Carex, 477
Notes on North American Hypocreales—II. Nectria Peziza, 201
Notes on other Siphonales, The genus Neomeris and, 75
Notes on Rosaceae, 397
Notes on the anatomy of Parosela spinosa (A. Gray) Heller, 573
Notes on the anatomy of Sesban macrocarpa Muhl., 625
Notes on the embryo-sac of Passiflora adenophylla, 273
Notes on the effect of mechanical pressure on the roots of Vicia Faba, 457
Notes on the genus Usnea, as represented in New England, Preliminary, 309
Noteworthy Hepaticae from the state of Washington, Some, 299
Nothaphyllon, 693, 694
Nymphaea, 590; fluviatilis, 589
Nymphoides, 545
Nyssa, 586; sylvatica, 664

Oakesia sessilifolia, 7, 659
Obolaria virginica, 659
Odontoschisma prostratum, 662
Oldenlandia uniflora, 587
Olivia, 90
On the characters and relationships of the Platanaceae, 389.
Onobrychis, 545
Onoclea Struthiopteris, 221, 222
Onychium, 466; cornutum, 475
Ophris, 544
Ophrys, 546
Opuntia fragilis, 269
Orchis, 543, 544; spectabilis, 659
Oreocarya **spicata,** 678; virgata, 678
Orobanche, 693, 694; bulbosa, 695; californica, 695; chilensis, 694; comosa, 695, 696; fasciculata, 693, 694; Grayana, 695; ludoviciana, 693, 694; ludoviciana Cooperi, 695; minor, 693, 694; multiflora, 695; pinorum, 695; purpurea, 693, 694; ramosa, 693, 694; uniflora, 693, 694; xanthochroa, 696
Oryzopsis, 670; melanocarpa, 670; racemosa, 670
Osmorrhiza brevistylis, 658
Osmotic theories, with special reference to van't Hoff's law, 283
Osmunda cinnamomea, 662; regalis, 662
Ostrich ferns, The power of growth exhibited by, 221
Ostrya virginiana, 656, 660, 664, 668, 669
Oxalis stricta, 666; violacea, 666
Oxycoccus, 237, 242, 545
Oxyria, 545
Oxytheca **Abramsii,** 605–607; Parishii, 605

Paliurus, 248; ovalis, 248
Pallavicinia Blyttii, 301, 302; Flotowiana, 301, 302; Lyellii, 302
Pandanus, 205, 207, 208, 210, 211, 213, 217–219; affinis, 208–210, 219; Artocarpus, 208, 210, 213, 218–220; odoratissimus, 208, 209, 213, 218, 220
Pandanus, The embryo-sac of, 205
Panicum agrostoides, 587, 591; verrucosum, 591; virgatum, 155, 587
Papaver, 545
Parietaria pennsylvanica, 29, 658
Parkeria, 475; Lockharti, 469, 475; pteridoides, 470, 475
Parosela, 573; spinosa, 574, 575, 579–581
Parosela spinosa (A. Gray) Heller, Notes on the anatomy of, 573

Passiflora adenophylla, 273; incarnata, 156; lutea, 156; pallens, 161; stipulata, 161
Passiflora adenophylla, Notes on the embryo-sac of, 273
Pastinaca sativa, 672
PECK, C. H. New species of fungi, 153, 329
Pedicularis canadensis, 659
Pellia epiphylla, 658, 662
Penicillium, 165; glaucum, 236
Penicillus, 95, 97, 100
Peninsular Florida, Additions to the flora of, 159
Pennsylvania, The plant formations of the Nockamixon Rocks, 651
Pentstemon albidus, 689, 690; alpinus, 688; **auricomus,** 688; azureus, 690; azureus Jaffrayanus, 690; caespitosus, 690; caespitosus suffruticosus, 689; **coccinatus,** 691; cristatus, 690; Eatonii, 691; Eatonii undosus, 691; glaber utahensis, 688; glaucus stenosepalus, 112; heterophyllus latifolius, 690; hirsutus, 668; Jaffrayanus, 690, 691; Jamesii, 688–690; laevigatus digitalis, 659; latifolius, 690; miser, 690; oreophilus, 688; **platyphyllus,** 690, 691; procumbens, 689, 690; **puberulus,** 112; pubescens, 668; pumilus, 690; pumilus Thompsoniae, 690; riparius, 688; similis, 689; **subglaber,** 688; suffrutescens, 689, 690; **Thompsoniae,** 690; utahensis, 688; Whippleanus, 112; xylus, 689, 690
Peperomia, 205–207, 210, 214–217, 219; hispidula, 213, 217, 218; pellucida, 206, 215; Sintenisii, 215
Persicaria hydropiperoides, 453, 454; incarnata, 452; lapathifolia, 452; opelousana, 453, 454; pennsylvanica, 452; Persicaria, 453; punctata, 455; punctata leptostachya, 455; **robustior,** 455; setacea, 454; **tomentosa,** 453
Petasites, 545
Peziza, 202; Dasyscypha vulpina, 203; hydrophora, 203
Phacelia alpina, 675, 676; arizonica, 112; **Burkei,** 675; **leptosepala,** 676; leucophylla, 676; nemoralis, 676; **nervosa,** 675; **similis,** 111
Phaseolites elegans, 256, 257; formus, 256; manhassettensis, 256, 257, 264
Phaseolus, 183, 190, 192
Phegopteris hexagonoptera, 657
Phelipaea, 694; californica, 695; carnosa, 695; comosa, 695; erianthera, 695; ludoviciana, 694; lutea, 693; pinetorum, 695; tuberosa, 695
Philadelphus, 119, 123, 128, 134, 139, 145
Philonotis fontana, 662
Phleum pratense, 378
Phloeospora, 149; Ulmi, 149
Phlox subulata, 668
Phoma, 237, 241; **platysperma,** 336
Phoradendron rubrum, 163
Phycological studies—IV. The genus Neomeris and notes on other Siphonales, 75
Phyla **stoechadifolia,** 162
Phyllactinia, 353
Phyllites, 250; ellipticus, 262; orbicularis, 250
Phyllitis, 545
Phyllosticta **innumerabilis,** 336
Physocarpus opulifolius, 656, 660, 664, 668–670
Phytolacca decandra, 671
Phytophthora infestans, 384
Picea, 123, 130, 132, 140, 141, 320; excelsa, 119, 123, 128, 134, 137, 145
Piedmont region of Georgia, Some coastal plain plants in the, 583
Pilea pumila, 661
Pimpinella Saxifraga, 666
Pinus, 123, 135, 247, 248, 390; echinata, 586; palustris, 586, 590, 592; **raritanensis,** 247; rigida, 664; Strobus, 664; Taeda, 586
Piptocalyx, 678
Plagiochila asplenioides, 658, 662; porelloides, 662
Plagiothecium denticulatum, 662
Plant formations of the Nockamixon Rocks, Pennsylvania, The, 651
Plantaginaceae—III. North American, 515
Plantago, 518; Bigelovii, 516, 518, 523–525; california, 523, 524, 529; caroliniana, 529; Durvillei californica, 529; elongata, 516–518, 520–522, 524, 525, 527; heterophylla, 521–524, 529; hybrida, 521, 527; lanceolata, 672; linearifolia, 527; macrosperma, 525; major, 528; maritima, 521, 527; myosuroides, 518, 525; pauciflora, 516; perpusilla, 529; picta, 515; pusilla, 516–518, 520–525, 527–529; pusilla **Engelmanni,** 522–524, 528; pusilla macrosperma, 516, 525; pusilla major, 522, 528; virginica, 524; **xerodea,** 515
Plants from New Mexico, Some hitherto undescribed, 105
Plants in the Piedmont region of Georgia, Some coastal plain, 583
Plants, Sex in dioecious, 177
Platanaceae, On the characters and relationships of the, 389

Platanus, 393, 394; occidentalis, 390, 656
Pneumaria, 545
Pneumococci, 35
Poa annua, 378; **callida,** 533; compressa, 378; **curta,** 534; Cusickii, 534; debilis, 670; flexuosa occidentalis, 535; **Helleri,** 534; idahoensis, 534; interior, 536; nemoralis, 378, 536; nervosa, 533; nevadensis, 534; occidentalis, 533, 535; Olneyae, 535; pratensis, 378; Sandbergii, 534; **scaberrima,** 534; serotina, 533; subaristata, 534; **subreflexa,** 535; **subtrivialis,** 535; trivialis, 378; Wheeleri, 535
Podophyllum peltatum, 659
Podosphaera, 353
Podozamites, 247; angustifolius, 247; **Knowltoni,** 247; lanceolatus, 247
Pogonatum brevicaule, 658
Pogonia, 546; ophioglossoides, 12
Polemonium coeruleum, 659; Van Bruntiae, 659
Polygala sanguinea, 666; verticillata, 006
Polygonatum, 410, 545; biflorum, 657; commutatum, 657; giganteum, 657; latifolium, 409; multiflorum, 409, 410; odoratum, 410; Polygonatum, 409; officinale, 410; Sigillum, 409
Polygonella articulata, 456
Polygonum, 254, 443; amphibium, 455; **atlanticum,** 450, 451; aviculare, 442–445, 447–449, 451; aviculare agrarium, 443; aviculare angustifolium, 446; aviculare angustissimum, 446; aviculare depressum, 445; aviculare diffusum, 443; aviculare erectum, 448; aviculare latifolium, 446, 448; aviculare laxum, 446; aviculare maximum, 448; aviculare neglectum, 446; aviculare procumbens, 445; aviculare tenuissimum, 446, 448; aviculare vegetum, 443, 448; Bellardi, 451; buxiforme, 444–446, 450; Convolvulus, 455; Dumetorum, 456; erectum, 444, 451; exsertum, 450; Fowleri, 450; littorale, 444, 445; maritimum, 442; monspeliense, 443, 444, 448; neglectum, 446, 448, 449; orientale, 671; Persicaria, 671; prolificum, 449, 450; provinciale, 445, 446; punctatum robustius, 455; ramosissimum, 450–452; ramosissimum atlanticum, 450; sagittatum, 455; tenue, 448, 666; tomentosum, 453; Zuccarinii, 455
Polyphysa, 89
Polypodium vulgare, 657, 658, 660, 662, 669, 670; vulgare grandiceps, 558
Polystichum, 43; acrostichoides, 657, 658, 661, 662
Polytrichum commune, 658, 665; piliferum, 665
Pontederia cordata, 3; cordata angustifolia, 3
Populus, 127, 130, 140, 250, 257; alba, 13; candicans, 14, 27; deltoides, 154; grandidentata, 14, 664, 669; hyperborea, 250, 263; **orbicularis,** 250; tremula, 14, 23; tremuloides, 14, 118, 125, 128, 129, 134, 144
Porella platyphylla, 658, 662
Porteranthus, 398
Portulaca oleracea, 671
Potentilla, 406, 407; acuminata, 407; canadensis, 670; norvegica, 671; reptans, 353; saxosa, 407
Power of growth exhibited by ostrich ferns, The, 221
Prairies, Some unsolved problems of the, 265
Preissia, 615, 617–619, 622
Preliminary notes on the genus Usnea, as represented in New England, 309
Preliminary revision, The genus Ceratopteris: a, 463
Prenanthes altissima, 156
Present treatment of monotypic genera of fungi, The, 147
Pressure on the roots of Vicia Faba, Notes on the effect of mechanical, 457
Problems of the prairies, Some unsolved, 265
Propositions relating to the amendment and completion of the International Rules of Botanical Nomenclature adopted by the International Botanical Congress of Vienna in 1905, 55
Propositions relatives à l'amendement et au complément des Règles internationales de la Nomenclature botanique, adoptées par le Congrès international de Botanique de Vienne en 1905, 65
Proteoides daphnogenoides, 252, 255
Protophyllum, 260; obovatum, 259
Prunus, 139; americana, 656; Avium, 117, 118; serotina, 656, 664, 668; virginiana, 656, 668
Psoralea, 581, 627
Pteridium aquilinum, 587
Pteris, 466; cornuta, 475; siliquosa, 476; thalictroides, 476
Pterospermites, 260; auriculatus, 260; **obovatus,** 259
Puccinia, 549; angustata, 549–551; **angustatoides,** 549–551; dispersa, 382,

383; dispersa Secalis, 383; dispersa Tritici, 383; Glumarum, 384; Graminis, 386
Puccinia, A new species of, 549
Pulmonaria, 545
Purpusia, 407; saxosa, 407
Pycnanthemum lanceolatum, 666
Pyrola rotundifolia, 659

Quamoclit, 595; brevipedicellata, 600; coccinea, 596, 598, 600; coccinea hederifolia, 599; coccinea **jaliscana,** 601; coccinea **luteola,** 600; coccinea pubescens, 600; cholulensis, 599; dichotoma, 599; globosa, 596–598; gracilis, 600; grandiflora, 596, 601; hastigera, 600; hederifolia, 600; indivisa, 599; **Langlassei,** 596, 597; **Lindleyi,** 596, 597; **lobata,** 596, 602; lutea, 600; Mina, 602; pinnata, 595, 596; Quamoclit, 595, 596; Ruiziana, 599; russelliaefolia, 600; vitifolia, 596, 602; vulgaris, 596
Quamoclit, Studies in the North American Convolvulaceae—V., 595
Quercus, 137, 140, 249; alba, 25, 119, 126, 128, 129, 132, 134, 145, 656, 663; bicolor, 27; Catesbaei, 590; coccinea, 23, 590, 661, 663; digitata, 24; georgiana, 590; ilicifolia, 25, 26; Johnstrupi, 249; laurifolia, 590; pagodaefolia, 24, 25; palustris, 27; prinoides, 26, 27; prinoides rufescens, 26; Prinus, 656, 660, 663, 664; **raritanensis,** 249; Robur, 27; rubra, 27, 119, 127, 129, 132, 661, 663, 664, 668; stellata, 25; tinctoria, 664; velutina, 23, 664

Radicula, 545; Armoracia, 492
Radiola, 545
Ramona, 683, 684
Ranunculus bulbosus, 671
REED, G. M. The mildews of the cereals, 353
Relationships of the Platanaceae, On the characters and, 389
Rhododendron, 123, 132, 140, 141; maximum, 119, 128, 134, 136, 145, 656, 658, 661, 664
Rhus copallina, 587; radicans, 657, 663, 669; typhina, 656, 664, 669
Ribes rotundifolium, 664; rubrum, 664
Robinia, 625; Pseudo-acacia, 656
ROCK, J. F. A new Hawaiian Scaevola, 645
Rocky Mountain flora, Studies on the, 531, 675
Roots of Vicia Faba, Notes on the effect of mechanical pressure on the, 457
Rosaceae, Notes on, 397
Rubus canadensis, 669; hispidus, 669; occidentalis, 656, 661, 668; odoratus, 656, 660, 661, 668; strigosus, 669
Rumex, 545; Acetosella, 441, 671; Britannica, 441; crispus, 441, 671; crispus × obtusifolius, 441; obtusifolius, 441, 671; pallidus, 442; persicarioides, 441; salicifolius, 442; verticillatus, 442
RYDBERG, P. A. Notes on Rosaceae, 397; Studies on the Rocky Mountain flora, 531, 675
Rynchospora, 549; corniculata, 549–552; glomerata, 587

Sabbatia campanulata, 588
Salix, 124, 130, 135, 139, 251, 252; acuminata, 17; acuminata obovata, 17; alba, 15, 119, 124, 128, 129, 134; alba × fragilis, 15; aquatica, 17; babylonica, 15; Bebbiana, 16, 18; cinerea, 16; cinerea obovata, 16; cinerea × viminalis, 15; cordata, 17, 660, 669; decipiens, 15; discolor, 17; eriocephala, 18; flexuosa, 252; fragilis, 14, 15, 119, 124, 128, 129, 134, 135, 144; Hayei, 251; humilis, 18; **Lesquereuxii,** 252; mattewanensis, 251; membranacea, 250, 251; nigra, 337; pentandra, 17; petiolaris, 16, 18; prinoides, 18; proteaefolia, 252; proteaefolia linearifolia, 252; proteaefolia longifolia, 252; **pseudo-Hayei,** 251; purpurea, 17; Raeana, 251; **raritanensis,** 250; rigida, 17; Russelliana, 15; sericea, 18; Smithiana, 15, 16; tristis, 18; viminalis, 16; vitellina, 15
Salomonia, 410; biflora, 9
Salvia, 683, 684
Sambucus, 139; racemosa, 656, 661, 668
Sanguinaria canadensis, 658, 661
Sanicula marilandica, 659
Saponaria officinalis, 671
Sassafras officinalis, 664
Satyrion, 543
Saxifraga pennsylvanica, 658, 660; virginiensis, 668, 670
Scaevola, A new Hawaiian, 645
Scaevola **Swezeyana,** 645
Scapania, 300, 306; dentata, 306; Evansii, 306; intermedia, 305, 306; nemorosa, 658, 662; nemorosa intermedia, 305; paludosa, 306; paludosa **papillosa,** 306, 307; paludosa vogesiaca, 307; umbrosa, 306
Schizonotus, 397, 398, 400, 401; argenteus alpestris, 403; argenteus fissus, 403; argenteus intermedius, 402; ar-

genteus mexicanus, 404; sorbifolius, 397
SCHNEIDER, R. C. New combinations in Araliaceae, 643
Sciadophyllum, 643; Belangeri, 643; troyanum, 644
Sciodaphyllum, 643
Scirpus atrovirens, 550, 551; Eriophorum, 587; subterminialis, 637
Scleria trichopoda, 591; triglomerata, 587
Scolopendrium vulgare crispum Drummondae, 558; vulgare marginale, 558; vulgare ramulosissimum, 558
Scrophularia marilandica, 688; neglecta, 688; occidentalis, 688; **serrata,** 688
Scutellaria angustifolia, 682; antirrhinoides, 682; lateriflora, 659; pilosa, 659; **veronicifolia,** 681
SEAVER, F. J. Notes on North American Hypocreales—II. Nectria Peziza, 201
Secale, 374, 376; anatolicum, 354, 368, 378; cereale, 354, 365–368, 377, 378, 380; cereale × Triticum vulgare, 355, 367, 378; dalmaticum, 355, 365, 368, 378; montanum, 355, 366, 368, 378
Sedum, 692; purpureum, 665, 669; Rhodiola, 669; roseum, 669; Telephium, **665, 669**
Selaginella rupestris, 665
Senecio obovatus, 662
Septaria, 149; Ulmi, 149
Septonema, 156
Septoria, 149; Ulmi, 149
Serapias, 543–548; atrorubens, 547; latifolia, 544; Lingua, 545
Sericocarpus asteroides, 666; conyzoides, 666; linifolius, 586
Sericotheca, 400, 401; argentea, 401, 403, 404; Boursieri, 401, 402; concolor, 401–403; discolor, 401, 402; dumosa, 402, 403; fissa, 403; franciscana, 402; glabrescens, 401, 403; microphylla, 401, 402; obovata, 403; pachydisca, 402; saxicola, 401; Schaffneri, 403; velutina, 403
Sesban, 630, 631; aculata, 630; macrocarpa, 625, 631, 632; marginata, 630
Sesban macrocarpa Muhl., Notes on the anatomy of, 625
Sesbania, 625; aculeata, 628
Sex in dioecious plants, 177
SHEAR, C. L. The present treatment of monotypic genera of fungi, 147
Sicyos, 111; **ampelophyllus,** 111; angulatus, 666; parviflorus, 111
Sida spinosa, 672
SILBERBERG, B. Stimulation of storage tissues of higher plants by zinc sulphate, 489
Silene stellata, 666
Siphonales, The genus Neomeris and notes on other, 75
Sisymbrium, 545; officinale, 671
Sisyrinchium arenicola, 12; atlanticum, 11; graminoides, 11
SMALL, J. K. Additions to the flora of Peninsular Florida, 159
Smilacina racemosa, 657, 661, 665, 668
Smilax, 248; glauca, 11; herbacea, 9, 665; laurifolia, 590; quadrangularis, 10, 11; **raritanensis,** 248; rotundifolia, 9–11, 665; rotundifolia quadrangularis, 9, 10; tamnoides, 10
Solanum, 183; Blodgettii, 161; Dulcamara, 672; tuberosum, 492
Solidago bicolor, 666; caesia, 666, 670; flexicaulis, 660; graminifolia, 671; lanceolata, 671; latifolia, 660, 666; nemoralis, 659; rugosa, 666; speciosa, 659; verna, 636
Some aspects of the mycorhiza problem, 165
Some coastal plain plants in the Piedmont region of Georgia, 583
Some hitherto undescribed plants from New Mexico, 105
Some noteworthy Hepaticae from the state of Washington, 299
Some unsolved problems of the prairies, 265
Sorbaria, 397, 398
Sorghastrum nutans, 157
Sparganium, 207, 208, 218; eurycarpum, 209; Greenii, 209; simplex, 208
Species and genera among the bacteria, A statistical criterion for, 31
Species of fungi, New, 153, 329
Species of Puccinia, A new, 549
Spermacoce aspera, 163
Spermatophytes from California, Two new, 605
Sphaeralcea, 105, 109; Fendleri, 108, 109; **glabrescens,** 107; hastulata, 107; **laxa,** 108, 110; **leiocarpa,** 107, 108; **pumila,** 110; **ribifolia,** 109; **simulans,** 109, 110; **tripartita,** 108, 109
Sphaeria, 148; bombarda, 149; Peziza, 201, 203; rhytismoides, 149
Sphaeropsis, 149, 150, 337; conica, 150; fertilis, 337; **simillima,** 337
Sphaerotheca, 353; Humuli, 353
Sphenopholis **intermedia,** 533; pallens major, 533
Spiraea, 397, 398; Boursieri, 402; californica, 399, 400; discolor, 398; dumosa, 401, 402; fissa, 403; mexicana, 404; Millefolium, 398; salici-

folia, 666; sorbifolia, 397; Ulmaria, 353
Spiranthes, 546; cernua, 665; gracilis, 665
Spirogyra, 184
Sporobolus, 531; depauperatus, 531
Sporogonium and adjacent tissues of the gametophore of Conocephalum conicum, The development of the, 615
STABER, M. J. Notes on the anatomy of Sesban macrocarpa Muhl., 625
Stachys **ampla,** 683; arenicola, 682; **asperrima,** 682; **Leibergii,** 682; palustris, 682; rivularis, 682; scopulorum, 682, 683; teucriformis, 683
Stagonospora **linearis,** 338
STANDLEY, P. C., & WOOTON, E. O. Some hitherto undescribed plants from New Mexico, 105
Staphylea trifolia, 656, 664, 668
State of Washington, Some noteworthy Hepaticae from the, 299
Statice, 545
Statistical criterion for species and genera among the bacteria, A, 31
Steccherinum, 342; **Ballouii,** 341
Steironema ciliatum, 669
Stellaria media, 671
Stellariopsis, 407
Sterigmatocystis, 236, 237, 238, 243; nigra, 235, 244
Sterigmatocystis nigra and the effect of chemical stimulation, Nitrogen assimilation of, 235
Stimulation, Nitrogen assimilation of Sterigmatocystis nigra and the effect of chemical, 235
Stimulation of storage tissues of higher plants by zinc sulphate, 489
STONE, G. E. The power of growth exhibited by ostrich ferns, 221
STONE, R. E. A new species of Puccinia, 549
Storage tissues of higher plants, Stimulation of, by zinc sulphate, 489
Streptococci, 34, 36
Streptococcus, 34
Studies in the North American Convolvulaceae—V. Quamoclit, 595
Studies on the Rocky Mountain flora, 531, 675
Studies, Phycological—IV. The genus Neomeris and notes on other Siphonales, 75
Study of winter buds with reference to their growth and leaf content, The, 117
Sulphate, Stimulation of storage tissues of higher plants by zinc, 489
Swamp cedar, A new fungus of the, 341
Swietenia Mahagoni, 161
Synthyris **dissecta,** 691, 692; pinnatifida, 691, 692
Syringa vulgaris, 118, 124, 126, 128, 132, 134, 139, 144

Tanacetum vulgare, 672
Taraxacum officinale, 672
Taxus canadensis, 656, 658, 660–662, 664, 668
Teleozoma, 475; thalictroides, 476
Tephrosia virginiana, 666
Teucrium canadense, 659
Thalesia, 694; fasciculata, 693; **lutea,** 693; **minuta,** 692, 693; purpurea, 692, 693; **Sedi,** 692; uniflora, 692
Thalictrum dioicum, 658; polygamum, 658; purpurascens, 658, 661; revolutum, 661
Thaspium aureum, 658; barbinode, 659
Thecanisia, 404
Theories, Osmotic, with special reference to van't Hoff's law, 283
Thuidium delicatulum, 658, 662
Thysanella fimbriata, 159; **robusta,** 159
Tilia, 132, 140; americana, 118, 129, 334, 656, 660, 661, 664, 668; vulgaris, 118, 128, 129, 134, 144
Tiniaria Convolvulus, 455; cristata, 456; Dumetorum, 456
Tinus, 398
Tissues, storage, of higher plants, Stimulation of by zinc sulphate, 489
Tissues of the gametophore of Conocephalum conicum, The development of the sporogonium and adjacent, 615
Toxylon, 254, 394
Tracaulon sagittatum, 455
Trachelospermum difforme, 588
Tradescantia virginiana, 3, 671, v
Tragopogon porrifolius, 492
Treatment of monotypic genera of fungi, The present, 147
Triadenum petiolatum, 589
Trichomanes × Asplenium Ruta-muraria, 41
Trichostema dichotomum, 666
Trifolium, 545; agrarium, 671; arvense, 671; incarnatum, 671; pratense, 671; procumbens, 671; repens, 671
Trillium, 183; cernuum, 658; erectum, 658
Triosteum perfoliatum, 659
Trisetum pratense, 378
Triticum, 355, 368, 374, 376; compactum, 368, 372, 375, 378, 380, 385;

compactum creticum, 355, 368; dicoccum, 354, 355, 363, 369, 370, 372, 373, 375, 376, 378–380, 383, 384; durum, 354–356, 363, 365, 368, 369, 371, 372, 373, 375, 378–380, 384; durum affine, 355; Freycenetii, 355, 368, 371, 378; monococcum, 354, 355, 368, 372, 373, 378, 384; monococcum Hornemannii, 355; monococcum vulgare, 355; polonicum, 354–356, 360, 363, 368, 369, 371, 373, 375, 378–380; sativum compactum, 368; sativum dicoccum, 355, 370; sativum durum, 371; sativum Spelta, 355, 373; sativum tenax, 355; sativum turgidum, 374; sativum vulgare, 376; Spelta, 354–356, 363, 368–371, 373, 375, 378–380, 384; Thaoudar, 355, 368, 374, 378; Tumonia, 355, 368, 374, 378; turgidum, 354, 355, 368, 374, 378, 384; vulgare, 354, 356, 358, 360, 363–365, 367–378, 380, 384, 385; vulgare affine, 371; vulgare Hornemanni, 372; vulgare × Secale cereale, 355, 367, 378
Tsuga canadensis, 656, 658, 660, 661, 663
Tussilago, 545
Two new spermatophytes from California, 605

Udotea, 97; argentea, 99; conglutinata, 94–96, 99, 100, 104; cyathiformis, 94–96, 100, 104; Flabellum, 99; Palmetta, 98; **spinulosa,** 97–100, 103
Ulmaria, 404
Ulmus, 130; americana, 14, 27, 118, 125, 128, 129, 132, 134, 144, 206, 656, 660, 664, 668; campestris, 27; racemosa, 656
Uncinula, 353
Undescribed plants from New Mexico, Some hitherto, 105
Unifolium canadense, 9
Uniola laxa, 587
Unsolved problems of the prairies, Some, 265
Uromyces, 549
Urtica dioica, 671; Lyallii, 28; urens, 28
Usnea, 309, 312, 315, 316, 325; angulata, 312, 318, 319, 325–327; barbata, 309–313, 315, 317, 318, 325, 326; barbata articulata, 318; barbata ceratina, 311, 315, 327; barbata dasypoga, 311, 317, 323, 327; barbata florida, 311, 313, 314, 317, 327; barbata florida f. hirta, 327; barbata florida f. strigosa, 314, 327; barbata plicata, 311, 317, 318, 324, 327; cavernosa, 312, 319, 322, 327; ceratina, 310, 325, 326; dasypoga, 310, 325, 326; florida, 310, 325, 326; hirta, 325, 326; longissima, 309, 312, 318, 321–323, 325–327; plicata, 310, 325, 326; rubiginea, 325, 326; serotina, 325; strigosa, 325, 326; trichodea, 309, 311, 318–321, 324–327
Usnea, as represented in New England, Preliminary notes on the genus, 309
Ustilago, 193, 236
Uvularia perfoliata, 659

Vaccinium, 545; fuscatum, 637
Vagnera racemosa, 8; stellata, 8
Valeriana, 545; micrantha, 697; occidentalis, 697; **puberulenta,** 697; **pubicarpa,** 697; Scouleri, 697
Valerianella, 545; Locusta, 672; olitoria, 672
Vauquelinia, 399; angustifolia, 400; californica, 400; corymbosa, 399, 400; Karwinskyi, 400; Torreyi, 399
Verbascum Thapsus, 668, 670
Verbena hastata, 672; stoechadifolia, 162; urticifolia, 672
Vernonia angustifolia, 587
Veronica officinalis, 659; peregrina, 659; scutellata, 659; serpyllifolia, 659; virginica, 659
Viburnum acerifolium, 656, 661, 663; dentatum, 663, 664; nudum, 587; pubescens, 664
Vicia americana, 659; Faba, 457, 460, 462
Vicia Faba, Notes on the effect of mechanical pressure on the roots of, 457
Victoria, 470
Vilfa, 531; depauperata, 531; squarrosa, 531
Viola blanda, 658; canadensis, 658; cucullata, 658; denticulosa, 588; fimbriatula, 666; palmata, 658; primulifolia, 587; pubescens, 666; sagittata, 666; scabriuscula, 666; striata, 658
Vitis aestivalis, 657; cordifolia, 657, 665, 669; Labrusca, 657, 663, 665; vulpina, 657
Volkameria, 398
Vulpia, 538; **megalura,** 538; **octoflora,** 538; **pacifica,** 538; **reflexa,** 538

Warea, 160; **Carteri,** 159, 160; cuneifolia, 160
Washington, Some noteworthy Hepaticae from the state of, 299
Webera sessilis, 658
Weisia viridula, 658, 665

Western American birches, The, 421
What is Convallaria odorata Mill.?, 409
Wheelerella, 678; circumscissa, 678
WINSLOW, C.-E. A. A statistical criterion for species and genera among the bacteria, 31
Winter buds with reference to their growth and leaf content, The study of, 117
Woodsia ilvensis, 670; obtusa, 670
WOOTON, E. O., & STANDLEY, P. C. Some hitherto undescribed plants from New Mexico, 105
Xyris caroliniana, 3; flexuosa, 2, 591; flexuosa pusilla, 2; montana, 2; torta, 591
Yucca glauca, 269
Zamites angustifolius, 247
Zea Mays, 191, 224, 457
Zinc sulphate, Stimulation of storage tissues of higher plants by, 489
Zizia cordata, 658